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lymphocytes relative to the wild type FIV-141 virus, or a nucleic acid molecules encoding said attenuated FIV-141 virus, comprising mutating an ENV gene.

32
45. (Amended) An attenuated FIV-141 virus produced by the method of claim 36.

46. (Amended) A nucleic acid molecule encoding the attenuated FIV-141 virus of claim 45.

47. (Amended) A host cell infected with the attenuated FIV-141 virus of claim 45.

48. (Amended) An attenuated whole virus vaccine, comprising the attenuated FIV-141 virus of claim 45, and a pharmaceutically acceptable carrier.

50. (Amended) A vaccine comprising the nucleic acid molecule of claim 46 at a concentration sufficient to induce immunity when administered to a cat, and a pharmaceutically acceptable carrier.

3
51. (Amended) A method of producing a nucleic acid molecule suitable for use in a vaccine for FIV-141 virus infection, comprising:

- a) reverse transcribing said FIV-141 virus's genomic RNA;
- b) cloning the reverse transcript of step (a);
- c) mutating the ENV gene in the cloned nucleic acid of step (b); and
- d) cloning the mutated nucleic acid of step (c).

52. (Amended) The method of claim 51, wherein the mutated nucleic acid molecule, upon introduction into a host cell, produces an attenuated FIV-141 virus that replicates but which exhibits significantly reduced infectivity to feline T-lymphocytes relative to FIV-141 virus made from the unmutated, wild type nucleic acid.

61. A host cell infected with a nucleic acid molecule prepared by the method of claim

51.

70. (Amended) A method of inducing an immune response in a cat, comprising
administering the vaccine of claim 48 to said cat at a dosage sufficient to induce protective
immunity against subsequent infection with at least one strain of said FIV-141.
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